A B S T R A C T

For a wafer earlier than a n'th wafer (n ≥ 2) in a lot, a method (and an apparatus) of this invention detects positions of all shot areas, separates a nonlinear component and linear component of each of position deviation amounts, evaluates nonlinear distortion of the wafer based on the position deviation amounts and an evaluation function, and calculates nonlinear components of the position deviation amounts of all shot areas according to a complement function determined based on the evaluation results. On the other hand, for the n'th or later wafer, the method (and the apparatus) calculates position coordinates, of all shot areas, having linear components of position deviation amounts thereof corrected by using EGA, and detects positions of the shot areas based on the position coordinates having linear components thereof corrected and the nonlinear components calculated in the above.